



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,522	09/29/2003	Hideki Ogura	01272.020634	9106
5514	7590	07/27/2005	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO			CULLER, JILL E	
30 ROCKEFELLER PLAZA			ART UNIT	PAPER NUMBER
NEW YORK, NY 10112			2854	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/671,522	<b>Applicant(s)</b> OGURA ET AL.	
	<b>Examiner</b> Jill E. Culler	<b>Art Unit</b> 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2005 and 08 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz in view of U.S. Patent No. 5,297,018 to Kashimura.

With respect to claims 1, 11-12 and 14, Schulz teaches a printing apparatus for introducing a printing medium, 1, from a first printing medium holding region, 3, and discharging a printing medium after being printed to a second printing medium holding region, 18, disposed above the first printing medium holding region, the first printing medium holding region and the second printing medium holding region being disposed on a first side of an apparatus body, including a paper-feeding tray, 3, disposed on the first side of a body of the image-forming apparatus while stacking the printing media therein at a slanted position so that a portion of the tray closer to the apparatus body is relatively lower, and a pickup roller, 6, for feeding the printing medium stacked in the paper-feeding tray; a reversal means, 12, for reversing the conveying direction of the printing medium fed by the pickup roller generally in the reverse direction by guiding the printing medium closer to a second side opposite to the first side, and then guiding closer to the first side; a conveying path for guiding the printing medium guided along the reversal path generally upwardly in the vicinity to the first side, deflection means, 11,

for deflecting the printing medium reversed by the reversal means such that the printing medium advances upward generally in the vertical direction in the vicinity of the first side of the apparatus body at the operating position, holding means for holding printing means wherein the printing means is a printing head, 15, capable of ejecting ink to the printing medium, such that the printing means is held at a position where the printing means overlies the reversal means, and a paper-discharging means, 20, including a paper-discharging tray, 19, disposed above the paper-feeding tray, 3, and a discharging roller, 23, for discharging the printing medium on which the record is printed by the printing means above the lower end of the paper-discharging tray, wherein the printing means, 15, is located above the paper feeding means and wherein the printing means performs printing by ejecting inks onto the printing medium that is guided by said deflection means so as to advance upwardly generally in the vertical direction. See column 3, lines 3-55 and Figure 1 in particular.

Schulz does not teach that the printing means comprises a printing head for printing on the printing medium while moving in the horizontal direction, or an ink tank is disposed above the ink jet printing head, for storing ink therein to be supplied to the ink jet printing head, or an openable member is provided on the second side to allow access to the inkjet printing head.

Kashimura teaches that the printing means is a printing head, 16, for printing on the printing medium while moving in the horizontal direction, see column 3, lines 47-50, an ink tank is disposed above the ink jet printing head, for storing ink therein to be supplied to the ink jet printing head, and is held by the ink jet printing head or the

Art Unit: 2854

holding means, see column 4, lines 51-56 and Figure 4, and an openable member is provided on the second side to allow access to the ink jet printing head. See column 3, lines 35-46.

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the inkjet printing details of Kashimura with the printing means of Schulz in order to more effectively set up and maintain the printing means.

With respect to claims 2 and 13, Schulz teaches a printing apparatus as in claim 1. Schulz does not teach that the second printing medium holding region is disposed below the first printing medium holding region, the first printing medium holding region and the second printing medium holding region being disposed on a first side of an apparatus body, or that the deflection means deflects the printing medium conveyed by the paper-feeding means such that the printing medium advances downward generally in the vertical direction. However, the variations between the structures appear to be merely a reversal of the direction of movement, rather than an actual difference in structure. One having ordinary skill in the art at the time of the invention would recognize this as an obvious variation of the invention and would be readily able to make whatever changes were necessary to accommodate this variation, as noted in applicant's specification, page 28, line 22 - page 29, line 6 and page 30, lines 9-16.

With respect to claim 3, Schulz teaches a frame, 4, encircling the reversal means the deflection means and the paper-discharging means. See column 3, lines 4-7. Although the reference does not specify a minimum frame, the term "minimum" is relative and can be broadly interpreted to include the teachings of Schulz.

With respect to claim 4, Schulz teaches all the constituent members except for the first printing medium holding region and the second printing medium holding region are disposed within the interior of an outer case member, 4, of a generally parallelepiped-shape, and the first printing medium holding region, 3, and the second printing medium holding region, 18, are provided on the same side of the outer case member. See column 3, lines 4-7 and Figure 1.

With respect to claims 5-6, Schulz does not teach that a length of a shorter side of the rectangular installation plane of the outer case member is shorter than a height of the outer case member, wherein the length of the shorter side of the rectangular installation plane of the outer case member is 100 mm or less, and the height of the outer case member is 400 mm or less.

Kashimura teaches a recording apparatus having an outer case member where a length of a shorter side of the rectangular installation plane of the outer case member is shorter than a height of the outer case member. See Figure 4.

It would be obvious to one having ordinary skill in the art at the time of the invention to modify the invention of Schulz to fit into a case member in the shape of Kashimura in order to have smaller external dimensions. Although Kashimura is silent on the exact size of these dimensions, the optimum size of the case member could readily be determined by one of ordinary skill in the art through routine experimentation and does not appear to require any unobviousness.

With respect to claim 7, Schulz teaches the printing means, 15, is held generally above the reversal means, 12, in the vertical direction, and the conveying path for the

Art Unit: 2854

printing medium is disposed in a space between the printing means and the reversal means. See Figure 1.

With respect to claim 8, Schulz teaches the reversal means is a reversal roller, 12, rotating about an axis thereof while being in tight contact on a surface thereof with the printing medium, 1, whereby the printing medium is conveyed while being wrapped around 90 degrees or more of a surface of the reversal roller. See Figure 1.

3. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz in view of Kashimura, as applied to claims 1-8 and 11-14 above, and further in view of U.S. Patent No. 6,447,188 to Ishizaki.

Schulz teaches all that is claimed, as in the above rejection of claims 1-8 and 11-14 except that either one of the first printing medium holding region or the second printing medium holding region is disposed at a larger angle relative to the horizontal plane and that a stack of the printing media in the first printing medium holding region is held at a vertical position by a first presser member when the printing apparatus is used.

Ishizaki teaches a first printing medium holding region, 51, holding a stack of the printing media at a vertical position by a first presser member, 58, when the printing apparatus is used and thus at a larger angle relative to the horizontal plane than the second printing medium holding region of Schulz.

It would have been obvious to one having ordinary skill in the art at the time of the invention to further modify the invention of Schulz to use the first printing medium

Art Unit: 2854

holding region of Ishizaki in order to provide the printing media from a holding region that requires a minimum of horizontal space.

### ***Response to Arguments***

4. Applicant's arguments filed June 10, 2005 have been fully considered but they are not persuasive.

In response to applicant's argument that Schulz does not disclose that the printing head overlies the reversal means or is above the paper-feeding means, given the broadest reasonable interpretation of these terms, Figure 1 of Schulz clearly shows printing head, 15, overlying the reversal means, 12, and located above pickup roller, 6, and rollers 7 and 8. Although the structure of the printing head, 15, is not directly or entirely over the pickup roller, 6, because it is located higher in the apparatus than the pickup roller it is considered to be above the roller. Therefore, the reference of Schulz meets the requirements of the invention as claimed by applicant.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill E. Culler whose telephone number is (571) 272-2159. The examiner can normally be reached on M-Th 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone



Art Unit: 2854

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jec

  
Patent Examiner